

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Canceled).

Claim 2 (Currently Amended): The ~~belt type continuous plate manufacturing apparatus according to claim 1~~ method of producing a plate polymer according to claim 11, wherein the widths of the two endless belts are both 1800 mm or greater, and the outer diameter D of the roll body portion of the upper and lower body pair is in the range of 130 mm to 500 mm.

Claim 3 (Currently Amended): The ~~belt type continuous plate manufacturing apparatus according to claim 1~~ method of producing a plate polymer according to claim 11, wherein a difference [P-D] between an arrangement distance P of a plurality of upper and lower roll pairs in the belt running direction and the outer diameter D of the roll body portion is in the range of 50 mm to 500 mm.

Claims 4-6 (Canceled).

Claim 7 (Currently Amended): The ~~belt type continuous plate manufacturing apparatus according to claim 4~~ method of producing a plate polymer according to claim 11, wherein in the crown shape of the roll body portion of the lower roll, a crown amount x represented by half a difference in diameter between the outermost diameter  $d_1$  of the end portion of the roll body portion and the outermost diameter  $d_2$  of the central portion shown by the following formula (1) and a self-weight deflection amount x of the roll body portion calculated from the following formula (2) satisfies the following formula (3):

$$x=(d_2-d_1)/2 \quad \dots (1)$$

$$y=5S \times \rho \times RW^4 / (384 \times E \times I) \quad \dots (2)$$

$$x \geq y \quad \dots (3)$$

S: area of cross section vertical to axis direction of roll body portion

$\rho$ : density of material of roll body portion

RW: width of roll body portion

E: Young's modulus of material of roll body portion

I: secondary moment of cross section vertical to axis direction of roll body portion.

Claim 8 (Currently Amended): ~~The belt type continuous plate manufacturing apparatus according to claim 1~~ method of producing a plate polymer according to claim 11, wherein all the upper rolls of the upper and lower roll pairs are flat rolls in which the tolerance of the outermost diameter of the roll body portion is 0.1 mm or less.

Claims 9-10 (Canceled).

Claim 11 (Currently Amended): ~~[[The]]~~ A method of producing a plate polymer according to claim 10, obtained from a polymerizable raw material comprising methyl methacrylate, said method comprising using a belt type continuous plate manufacturing apparatus, [[in]] which when the total number of upper and lower roll pairs placed at a position nearer to the raw material feeding side than a position showing a peak by heat polymerization in a heating zone in the process in which the polymerizable raw material is solidified while running with the belt is set to 100%, the number of said upper and lower roll pairs with the lower roll body portion having a crown shape is 4% or greater apparatus comprises two endless belts so placed that their facing belt surfaces run toward the same

direction at the same speed, and continuous gaskets running under condition of being sandwiched by belt surfaces at their both side edge portions, wherein the polymerizable raw material is fed into a space surrounded by the facing belt surfaces and the continuous gaskets from its one end, the polymerizable raw material is solidified together with running of the belts in a heating zone, and the plate polymer is taken out from the other end, wherein a plurality of upper and lower roll pairs each composed of an upper roll in contact with the upper surface of the upper belt and a lower roll in contact with the lower surface of the lower belt and having axes orthogonally crossing the belt running direction are placed along the belt running direction as a belt surface holding mechanism for the endless belts facing each other and running in the heating zone, the outer diameter D of the roll body portion of the upper and lower roll pairs is in the range of 100 mm to 500 mm,

polymerization proceeds in the heating zone and a temperature peak caused by heat of polymerization is attained at a position in said zone, and at least 4% of the total number of upper and lower roll pairs placed between the raw material feeding end and the position of said temperature peak contain a lower roll body portion having a crown shape.

Claim 12 (Currently Amended): The method of producing a plate polymer according to claim 11, ~~said method using a belt type continuous plate manufacturing apparatus in which when a district from an inlet of a heating zone to a position showing a peak by heat polymerization in the process in which the polymerizable raw material is solidified while running with the belt is set to 0 to 100%, upper and lower roll pairs with the lower roll portion having a crown shape are placed in a district of 0 to 90% wherein 0 to 90% of the total number of upper and lower roll pairs placed between the inlet of the heating zone and the position of said temperature peak contain a lower roll body portion having a crown shape.~~

Claim 13 (Currently Amended): The method of producing a plate polymer according to claim 11, ~~said method using a belt type continuous plate manufacturing apparatus in which when a district from an inlet of a heating zone to a position showing a peak by heat polymerization in the process in which the polymerizable raw material is solidified while running with the belt is set to 0 to 100%, upper and lower roll pairs with the lower roll portion having a crown shape are placed in a district of 30 to 90% wherein 30 to 90% of the total number of upper and lower roll pairs placed between the inlet of the heating zone and the position of said temperature peak contain a lower roll body portion having a crown shape.~~

Claim 14 (Currently Amended): ~~[[A]]~~ The method of producing a plate polymer, ~~polymer according to claim 11, wherein characterized in that using the belt type continuous plate manufacturing apparatus according to claim 1 in which a lower roll axis of the upper and lower roll pair is supported on a fixed side wall, an upper roll axis of the upper and lower roll pair is supported on a beam capable of moving up and down, and a spring is placed in contact with said beam, and~~

~~the amount of width direction deflection of upper and lower rolls is adjusted by adjusting a linear load applied to the belt surface by the upper roll by changing the compression length or extension length of said spring, and a plate polymer is obtained from a polymerizable raw material containing methyl methacrylate.~~

Claim 15 (Original): The method of producing a plate polymer according to claim 14, wherein the linear load applied to the belt surface by the upper roll is adjusted to be in the range of 10 kg/m to 200 kg/m per unit width of the belt.

Claim 16 (Currently Amended): A method of producing a plate ~~polymer~~, polymer according to claim 11, ~~wherein characterized in that a plate polymer is obtained from a polymerizable raw material containing methyl methacrylate using the belt type continuous plate manufacturing apparatus according to claim 9~~ the surfaces of the two endless belts in contact with the polymerizable raw material are mirror-polished so that the value of surface roughness Ra specified by the JIS roughness shape parameter (JIS B0601-1994) is 0.1  $\mu\text{m}$  or less, and the maximum diameter of pinholes is 250  $\mu\text{m}$  or less.

Claim 17 (New): A method of producing a plate polymer according to claim 11, wherein at least 8% of the total number of upper and lower roll pairs placed between the raw material feeding end and the position of said temperature peak contain a lower roll body portion having a crown shape.

Claim 18 (New): A method of producing a plate polymer according to claim 11, wherein at least 10% of the total number of upper and lower roll pairs placed between the raw material feeding end and the position of said temperature peak contain a lower roll body portion having a crown shape.

Claim 19 (New): A method of producing a plate polymer according to claim 16, wherein the surface roughness Ra is from 0.001  $\mu\text{m}$  to 0.08  $\mu\text{m}$ .